


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide



THE ACM DIGITAL LIBRARY


[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Terms used

[flash](#) [eeprom](#) [power](#) [estimation](#) [size](#) [chip](#) [IC](#) [integrated](#) [circuit](#)

Found 3 of 184,245

Sort results by


[Save results to a Binder](#)
[Try an Advanced Search](#)

Display results


[Search Tips](#)
[Try this search in The ACM Guide](#)
☐ Open results in a new window

Results 1 - 3 of 3

Relevance scale ☐ ☐ ☐ ☐ ☐

1 [Security on FPGAs: State-of-the-art implementations and attacks](#)



Thomas Wollinger, Jorge Guajardo, Christof Paar

August 2004 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 3 Issue 3**Publisher:** ACM PressFull text available: [pdf\(296.79 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In the last decade, it has become apparent that embedded systems are integral parts of our every day lives. The wireless nature of many embedded applications as well as their omnipresence has made the need for security and privacy preserving mechanisms particularly important. Thus, as field programmable gate arrays (FPGAs) become integral parts of embedded systems, it is imperative to consider their security as a whole. This contribution provides a state-of-the-art description of security issues ...

Keywords: Cryptography, FPGA, attacks, cryptographic applications, reconfigurable hardware, reverse engineering, security

2 [Hardware specialization: Energy management for commodity short-bit-width microcontrollers](#)



Rony Ghattas, Alexander G. Dean

September 2005 **Proceedings of the 2005 international conference on Compilers, architectures and synthesis for embedded systems CASES '05****Publisher:** ACM PressFull text available: [pdf\(462.68 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Dynamic frequency scaling and dynamic voltage scaling have been developed to save power and/or energy for general purpose computing platforms and high-end embedded systems. This paper examines the practicality of using these advanced techniques to save power and energy for commodity 8-bit microcontrollers while leveraging their built-in low-power modes. The benefits of the techniques are weighed against their complexity and cost. First, we mathematically model the power dissipation characteristi ...

Keywords: dynamic frequency scaling, dynamic voltage scaling, embedded systems, energy modeling, short-bit-width microcontroller

3 [Efficient identification of hot data for flash memory storage systems](#)



Jen-Wei Hsieh, Tei-Wei Kuo, Li-Pin Chang

February 2006 **ACM Transactions on Storage (TOS)**, Volume 2 Issue 1



Publisher: ACM Press

Full text available: [pdf\(557.23 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Hot data identification for flash memory storage systems not only imposes great impacts on flash memory garbage collection but also strongly affects the performance of flash memory access and its lifetime (due to wear-levelling). This research proposes a highly efficient method for on-line hot data identification with limited space requirements.

Different from past work, multiple independent hash functions are adopted to reduce the chance of false identification of hot data and to provide predic ...

Keywords: Storage system, flash memory, garbage collection, workload locality

Results 1 - 3 of 3

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2006 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads: [Adobe Acrobat](#) [QuickTime](#) [Windows Media Player](#) [Real Player](#)

EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|---------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------|---------|------------------|
| S2 | 27714 | "711"/\$.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:24 |
| S3 | 91453 | flash adj memory | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:14 |
| S4 | 7530 | eras\$4 near2 block\$2 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:14 |
| S5 | 1341717 | module\$2 or chip\$2 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:15 |
| S6 | 74234 | (new or update\$) adj data | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:15 |
| S7 | 74870 | (new or update\$ or fresh\$4) adj data | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:16 |
| S8 | 4004 | ((new or update\$ or fresh\$4) adj data) near3 (writ\$4 or stor\$4)) same (chip\$2 or module\$2 or unit\$2) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:19 |
| S9 | 4617 | S3 and S4 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:18 |
| S10 | 198 | S8 and S9 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:18 |

EAST Search History

| | | | | | | |
|-----|--------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----|-----|------------------|
| S11 | 592 | (((new or update\$ or fresh\$4) adj data) near3 (writ\$4 or stor\$4)) same (chip\$2 or module\$2 or unit\$2) same "same" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 13:19 |
| S12 | 49 | S9 and S11 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:11 |
| S13 | 129 | (Tomohiro near Hayashi).in. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:11 |
| S14 | 2 | S12 and S13 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:22 |
| S15 | 63570 | (data near2 size) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:35 |
| S16 | 464648 | (estimat\$5 or determin\$4) near4 (time or power) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:23 |
| S17 | 911 | S15 same S16 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:24 |
| S18 | 1549 | "711"/103.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:24 |
| S19 | 10 | S17 and S18 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:24 |
| S20 | 385 | (size near2 data) same (estimat\$4 or determin\$4) same ("how long" or power) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:37 |

EAST Search History

| | | | | | | |
|-----|----|------------------------|---------------------------------------------------------|----|-----|------------------|
| S21 | 29 | S2 and S20 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:48 |
| S22 | 3 | S21 and @ad<"19940819" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:51 |
| S23 | 54 | S20 and @ad<"19940819" | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2006/01/26 14:51 |



Welcome United States Patent and Trademark Office

[Search Session History](#)[BROWSE](#)[SEARCH](#)[IEEE XPLORE GUIDE](#)

Wed, 16 Aug 2006, 6:01:19 PM EST

Edit an existing query or compose a new query in the Search Query Display.

Search Query Display

Select a search number (#) to:

- Add a query to the Search Query Display
- Combine search queries using AND, OR, or NOT
- Delete a search
- Run a search

Recent Search Queries

- | | |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1 | ((module or integrated chip or ic)<in>metadata) |
| #2 | (eprom* or EPROM* or ROM) and (block* or segment*) |
| #3 | (determin* or estimat*) and (power or size) |
| #4 | (data size or address size<IN>metadata) |
| #5 | ((power control*) or (power reservation)<IN>metadata) |
| #6 | ((((module or integrated chip or ic)<in>metadata)) <AND> ((eprom* or EPROM* or ROM) and (block* or segment*))) |
| #7 | ((determin* or estimat*) and (power or size)) <AND> ((data size or address size<IN>metadata)) |
| #8 | ((((power control*) or (power reservation)<IN>metadata)) <AND> (((determin* or estimat*) and (power or size)) <AND> ((data size or address size<IN>metadata)))) |
| #9 | (((((module or integrated chip or ic)<in>metadata)) <AND> ((eprom* or EPROM* or ROM) and (block* or segment*))) <AND> (((power control*) or (power reservation)<IN>metadata)) <AND> (((determin* or estimat*) and (power or size)) <AND> ((data size or address size<IN>metadata)))) |

Indexed by
 Inspect

[Help](#) [Contact Us](#) [Privacy](#)

© Copyright 2006 IE